

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of :  
**Yutaka ONOZAWA,** : **HARD COAT FILM**  
**Toshio SUGIZAKI** :  
**and Satoshi SAKURAI** :  
Serial No. Not Yet Assigned :  
Filed Concurrently Herewith :

Pittsburgh, Pennsylvania

June 27, 2001

**PRELIMINARY AMENDMENT**

**BOX PATENT APPLICATION**  
Commissioner for Patents  
Washington D.C. 20231

Sir:

Prior to initial examination, please amend the above-identified patent application as follows:

**IN THE SPECIFICATION:**

Please amend section headings and amend specification paragraphs as follows. (Pursuant to 37 CFR 1.121, marked-up versions of the amended specification paragraphs are attached.)

On page 1, please delete the first complete paragraph and insert the following replacement paragraph:

The present invention relates to a novel hard coat film, more particularly a hard coat film having excellent resistance to impact and weather, and suitable for being stuck on external surfaces, in particular those of window panes and plastic boards for windows.

**On page 1, please delete the second complete paragraph and insert the following replacement paragraph:**

It is known to apply plastic films on window panes and plastic boards for windows for various purposes. For example, sunlight entering a room through a window pane contains ultraviolet and infrared rays, in addition to visible rays. The ultraviolet rays in sunlight causes sunburn. Its adverse effects on a human body have been recently pointed out, and it is well known that it deteriorates a packing material and content thereof. The infrared rays in sunlight, on the other hand, increase temperature in a room by direct sunlight, lowering an air-conditioning effect in summer. In order to avoid these undesirable effects, window panes and plastic boards for windows are covered with an ultraviolet- or infrared-shielding film. They are also frequently covered with a film for view-obstructing purposes, or for preventing fragment scattering when the window pane is broken by a hazard, e.g., earthquake. The above films for shielding ultraviolet or infrared rays, or for view obstruction also have an effect of preventing fragment scattering.

**On page 2, please delete the first complete paragraph and insert the following replacement paragraph:**

More recently, use of the above-described plastic films has been studied, to protect window panes of vehicles running at a high speed. For example, a train generates a high wind pressure when it is passing through a tunnel, thus blowing off pebbles and snow blocks which may directly attack the train's window panes. The plastic film for preventing

the above troubles is especially required to be high resistant to impact, and also to be highly resistant to weather because it is put in service continuously under severe conditions.

**On page 4, please delete the section headings "BRIEF SUMMARY OF THE INVENTION" and "Object of the Invention".**

**On page 4, delete the first complete paragraph and insert the following replacement paragraph:**

In order to solve the above problems, the present invention provides a preferably transparent hard coat film having excellent resistance to impact and weather and high surface hardness, which is particularly suitable for application, as by sticking on external surfaces, such as, for example, on window panes or plastic boards for windows.

**On page 4, before the second complete paragraph, amend the section heading "Summary of the Invention" to read as follows:**

#### SUMMARY OF THE INVENTION

**On page 5, please delete the second and third complete paragraphs and insert the following replacement paragraphs:**

The hard coat film of the present invention is suitably used by sticking the hard coat film on the external surfaces, e.g., those of window panes and plastic boards for windows.

The hard coat film of the present invention, having the above-mentioned unique structure, is resistant to impact and weather, high in surface hardness, and in particular suitable for application on external surfaces of window panes or plastic boards for windows.

**On page 6, please amend the first section heading "DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS" to read as follows:**

#### DETAILED DESCRIPTION OF THE INVENTION

**On page 6, please delete the second complete paragraph and insert the following replacement paragraph:**

The present invention will be described in detail below.

**On page 6, please delete the fourth complete paragraph and insert the following replacement paragraph:**

The multi-layered base for the present invention may be a laminated film of the same resin films or different resin films. The number of these films is not limited, so long as two or more films are used.

**On page 19, before the first complete paragraph, please delete the section heading "EFFECT OF THE INVENTION"**

**On page 19, please delete the first complete paragraph and insert the following replacement paragraph:**

It will, thus, be understood that the hard coat film of the present invention, having the above-mentioned unique structure, is resistant to impact and weather, high in surface hardness, and in particular suitable for being stuck on the external surfaces, e.g., those of window panes or plastic boards for windows.

**On page 22, please delete the first and second complete paragraphs and insert the following replacement paragraphs:**

The polyethylene terephthalate film surface of Material 2 was provided with an 8  $\mu\text{m}$  thick acrylic-based adhesive layer, on which the 50  $\mu\text{m}$  thick polyethylene terephthalate film (the same as that described above) was attached in the same manner, to prepare the laminated film. This laminated film is referred to as Material 3.

The same procedure was repeated to form an 8  $\mu\text{m}$  thick acrylic-based adhesive layer, on which the 50  $\mu\text{m}$  thick polyethylene terephthalate film (the same as that described

above) was put in the same manner, to prepare the laminated film. This laminated film is referred to as Material 4.

**IN THE CLAIMS:**

**Please cancel the previous versions of claims 6, 7, 9, and 10 and insert the amended versions of claims 6, 7, 9, and 10 as follows: (Pursuant to 37 CFR 1.121, marked-up versions of these claims are attached.)**

6. (Amended) The hard coat film according to Claim 4, wherein said weather-resistant resin film contains an ultraviolet absorber.

7. (Amended) The hard coat film according to Claim 4, wherein said weather-resistant resin film is made of polycarbonate or polymethyl methacrylate.

9. (Amended) The hard coat film according to Claim 1, wherein a releasing sheet is provided via an adhesive layer on a side made of said multi-layered base opposite to a side provided with said silicone-based hard coat layer.

10. (Amended) The hard coat film according to Claim 1 for application on external surfaces of window panes or plastic boards for windows.

Please add claims 11-28 as follows:

11. The hard coat film according to Claim 5, wherein said weather-resistant resin film contains an ultraviolet absorber.

12. The hard coat film according to Claim 5, wherein said weather-resistant resin film is made of polycarbonate or polymethyl methacrylate.

13. The hard coat film according to Claim 2, wherein a releasing sheet is provided via an adhesive layer on a side made of said multi-layered base opposite to a side provided with said silicone-based hard coat layer.

14. The hard coat film according to Claim 3, wherein a releasing sheet is provided via an adhesive layer on a side made of said multi-layered base opposite to a side provided with said silicone-based hard coat layer.

15. The hard coat film according to Claim 4, wherein a releasing sheet is provided via an adhesive layer on a side made of said multi-layered base opposite to a side provided with said silicone-based hard coat layer.

16. The hard coat film according to Claim 5, wherein a releasing sheet is provided via an adhesive layer on a side made of said multi-layered base opposite to a side provided with said silicone-based hard coat layer.

17. The hard coat film according to Claim 6, wherein a releasing sheet is provided via an adhesive layer on a side made of said multi-layered base opposite to a side provided with said silicone-based hard coat layer.

18. The hard coat film according to Claim 7, wherein a releasing sheet is provided via an adhesive layer on a side made of said multi-layered base opposite to a side provided with said silicone-based hard coat layer.

19. The hard coat film according to Claim 8, wherein a releasing sheet is provided via an adhesive layer on a side made of said multi-layered base opposite to a side provided with said silicone-based hard coat layer.

20. The hard coat film according to Claim 9, wherein a releasing sheet is provided via an adhesive layer on a side made of said multi-layered base opposite to a side provided with said silicone-based hard coat layer.

21. The hard coat film according to Claim 2 for application on external surfaces of window panes or plastic boards for windows.

22. The hard coat film according to Claim 3 for application on external surfaces of window panes or plastic boards for windows.

23. The hard coat film according to Claim 4 for application on external surfaces of window panes or plastic boards for windows.

24. The hard coat film according to Claim 5 for application on external surfaces of window panes or plastic boards for windows.

25. The hard coat film according to Claim 6 for application on external surfaces of window panes or plastic boards for windows.

26. The hard coat film according to Claim 7 for application on external surfaces of window panes or plastic boards for windows.

27. The hard coat film according to Claim 8 for application on external surfaces of window panes or plastic boards for windows.

28. The hard coat film according to Claim 9 for application on external surfaces of window panes or plastic boards for windows.

Patented by the inventor



**IN THE ABSTRACT:**

**Please delete the ABSTRACT and insert the following replacement  
ABSTRACT:**

A hard coat film is provided, having excellent resistance to impact and weather, and high surface hardness, which is suitable for being stuck on the external surfaces, e.g., those of window panes or plastic boards for windows. In the hard coat film, a silicone-based hard coat layer is provided on one side of a multi-layered base composed of a plurality of the same or different laminated resin films.

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P02390 "P2E+6350

**REMARKS**

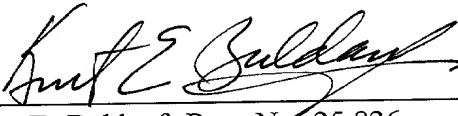
Amendments have been made to the specification in order to place the application in conformance with standard United States Patent practice.

Claims 6, 7, 9 and 10 have been amended to eliminate the multiple dependencies and to conform the claims to standard United States patent practice. New claims 11-28 have been added to further define the invention.

Examination and allowance of pending claims 1-28 are respectfully requested.

Respectfully submitted,

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### MARKED-UP AMENDED CLAIMS

6. (Amended) The hard coat film according to Claim 4 [or 5], wherein said weather-resistant resin film contains an ultraviolet absorber.

7. (Amended) The hard coat film according to Claim 4 [or 5], wherein said weather-resistant resin film is made of polycarbonate or polymethyl methacrylate.

9. (Amended) The hard coat film according to [any one of Claims 1 to 8] Claim 1, wherein a releasing sheet is provided via an adhesive layer on a side made of said multi-layered base opposite to a side provided with said silicone-based hard coat layer.

10. (Amended) The hard coat film according to [any one of Claims 1 to 9 used] Claim 1 for [being stuck] application on [the] external surfaces[, e.g., those] of window panes or plastic boards for windows.

## MARKED-UP AMENDED SPECIFICATION HEADINGS AND PARAGRAPHS

### Page 1, first complete paragraph

The present invention relates to a novel hard coat film, more particularly a hard coat film having excellent [in] resistance to impact and weather, and suitable for being stuck on external surfaces, in particular those of window panes and plastic boards for windows.

### Page 1, second complete paragraph

It is known to apply plastic [Plastic] films [have been used to be stuck] on window panes and plastic boards for windows for various purposes. For example, sunlight entering a room through a window pane contains ultraviolet and infrared rays, in addition to visible [ray] rays. The ultraviolet [ray] rays in sunlight causes sunburn. Its adverse effects on a human body have been recently pointed out, and it is well known that it deteriorates a packing material and content thereof. The infrared [ray] rays in sunlight, on the other hand, [increases] increase temperature in a room by direct sunlight, lowering an air-conditioning effect in summer. In order to avoid these undesirable effects, window panes and plastic boards for windows are covered with an ultraviolet- or infrared-shielding film. They are also frequently covered with a film for view-obstructing purposes, or for preventing fragment scattering when the window pane is broken by a hazard, e.g., earthquake. The above films for shielding ultraviolet or infrared [ray] rays, or for view obstruction also have an effect of preventing fragment scattering.

### Page 2, first complete paragraph

More recently, use of the above-described plastic films has been studied, to protect window panes of vehicles running at a high speed. For example, a train generates a high wind pressure when it is passing through a tunnel, thus blowing off pebbles and snow blocks which may directly attack the train's window panes. The plastic film for preventing the above

troubles is especially required to be highly [resistance] resistant to impact, and also to be highly resistant to weather because it is put in service continuously under severe conditions.

**Page 4, first complete paragraph**

[It is an object of] In order to solve the above problems, the present invention [to provide] provides a preferably transparent hard coat film having excellent [in] resistance to impact and weather[, and high [in] surface hardness, [and in particular] which is particularly suitable for [being stuck] application, as by sticking on [the] external surfaces, [e.g., those of] such as, for example, on window panes or plastic boards for windows[, in order to solve the above problems].

**Page 4, second section heading**

[Summary of the Invention]                      SUMMARY OF THE INVENTION

**Page 5, second and third complete paragraphs**

The hard coat film of the present invention is suitably used [for being stuck] by sticking the hard coat film on the external surfaces, e.g., those of window panes and plastic boards for windows.

The hard coat film of the present invention, having the above-mentioned unique structure, is resistant to impact and weather, high in surface hardness, and in particular suitable for [being stuck] application on [the] external surfaces[, e.g., those] of window panes or plastic boards for windows.

**Page 6, first section heading**

[DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS]

DETAILED DESCRIPTION OF THE INVENTION

**Page 6, second complete paragraph**

The present invention will be described [more concretely] in detail below.

**Page 6, fourth complete paragraph**

The multi-layered base for the present invention may be a laminated film of the same resin films or different resin films. The number of these films is not limited, so long as two or more [of] films are used.

**Page 19, first complete paragraph**

[The] It will, thus, be understood that the hard coat film of the present invention, having the above-mentioned unique structure, is resistant to impact and weather, high in surface hardness, and in particular suitable for being stuck on the external surfaces, e.g., those of window panes or plastic boards for windows.

**Page 22, first and second complete paragraphs**

The polyethylene terephthalate film surface of Material 2 was [provided] provided with [a] an 8  $\mu\text{m}$  thick acrylic-based adhesive layer, on which the 50  $\mu\text{m}$  thick polyethylene terephthalate film (the same as that described above) was attached in the same manner, to prepare the laminated film. This laminated film is referred to as Material 3.

The same procedure was repeated to form [a] an 8  $\mu\text{m}$  thick acrylic-based adhesive layer, on which the 50  $\mu\text{m}$  thick polyethylene terephthalate film (the same as that described above) was put in the same manner, to prepare the laminated film. This laminated film is referred to as Material 4.

**MARKED-UP VERSION OF THE ABSTRACT OF THE DISCLOSURE**

[It is an object of the present invention to provide a] A hard coat film is provided, having excellent [in] resistance to impact and weather, and high [in] surface hardness, [and in particular] which is suitable for [being stuck] application on the external surfaces, e.g., those of window panes or plastic boards for windows. In the hard coat film [of the present invention], a silicone-based hard coat layer is provided on one side of a multi-layered base composed of a plurality of the same or different laminated resin films [laminated].

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